

## (54) SEMICONDUCTOR DEVICE

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(71) SHARP CORP (72) AKIO GOTO  
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**PURPOSE:** To improve a manufacturing yield of devices as a whole by a method wherein a common input/output lead is connected electrically with each of stacked chips and the whole is sealed with resin or a cap.

**CONSTITUTION:** In a semiconductor device 1 wherein four semiconductor chips 2 are stacked, each of the semiconductor chips 2 is provided with bumps 3 on the opposite sides and copper foil leads 4 are connected to the bumps 3 respectively. These chips 2 are stacked with insulating layers 5 interposed. The leads 4 are connected electrically by studs 6 and the stud of the lowermost layer is connected to a lead frame 7. The lead frame 7 is fixed on a base made of plastic and resin packing is conducted in this state. According to this constitution, the number of input/output terminals formed on each chip can be lessened and the quality of the semiconductor chips having the respective functions can be inspected before the chips are assembled.

